

## CLAIMS

1. An electrolytic processing apparatus, comprising:

a holder for detachably holding a workpiece;

5 a processing electrode that can come close to or into contact with the workpiece held by the holder;

a feeding electrode for feeding electricity to the workpiece held by the holder;

10 an ion exchanger disposed in at least one of the space between the workpiece and the processing electrode and the space between the workpiece and the feeding electrode;

a fluid supply section for supplying a fluid between the workpiece and at least one of the processing electrode and the feeding electrode, in which the ion exchanger is present;

15 a power source for applying a voltage between the processing electrode and the feeding electrode;

a drive section for allowing the workpiece held by the holder and the processing electrode, facing each other, to make a relative movement; and

20 a numerical controller for effecting a numerical control of the drive section.

2. The electrolytic processing apparatus according to claim 1, wherein the power source supplies an electric current

25 or a voltage controlled at a constant value between the processing electrode and the feeding electrode.

3. The electrolytic processing apparatus according to claim 2, wherein the numerical controller numerically controls

30 the relative movement speed between the workpiece held by the holder and the processing electrode via the drive section.

4. The electrolytic processing apparatus according to claim 2, wherein the numerical controller numerically controls a stop time in a relative step movement of the workpiece held by the holder and the processing electrode via the drive section.

5. An electrolytic processing method, comprising:

providing a processing electrode, a feeding electrode and an ion exchanger disposed in at least one of the space between 10 a workpiece held by a holder and the processing electrode and the space between the workpiece and the feeding electrode;

allowing the processing electrode to be close to or in contact with the workpiece held by the holder while feeding electricity from the feeding electrode to the workpiece;

15 supplying a fluid to the space between the workpiece and at least one of the processing electrode and the feeding electrode, in which the ion exchanger is present;

applying a voltage between the processing electrode and the feeding electrode; and

20 allowing the workpiece held by the holder and the processing electrode, facing each other, to make a relative movement while numerically controlling the movement by a numerical controller.

25 6. The electrolytic processing method according to claim 5, wherein an electric current or a voltage controlled at a constant value is supplied between the processing electrode and the feeding electrode.

30 7. The electrolytic processing method according to claim 6, comprising:

measuring the form of the workpiece before and/or during processing;

inputting coordinate data on the measured form and on an intended form after processing of the workpiece to the numerical controller; and

numerically controlling the relative movement speed  
5 between the workpiece held by the holder and the processing electrode according to the coordinate difference between the measured form and the intended form.

8. The electrolytic processing method according to claim  
10 6, comprising:

measuring the form of the workpiece before and/or during processing;

inputting coordinate data on the measured form and on an intended form after processing of the workpiece to the numerical  
15 controller; and

numerically controlling a stop time in a relative step movement of the workpiece held by the holder and the processing electrode according to the coordinate difference between the measured form and the intended form.